

News and Views

Prof. Walther Nernst, For.Mem.R.S.

ON June 25, Walther Nernst, well known as a physical chemist, will celebrate his seventy-fifth birthday. Nernst was born at Briesen, West Prussia, and studied at the Universities of Zurich, Berlin, Graz and Würzburg. He worked under F. Kohlrausch at Würzburg, where he took his degree. His thesis connected his name for all time with the thermomagnetic effects he had discovered. Eventually, he became professor of physical chemistry in the University of Göttingen and principal of the laboratory that he had just equipped for this branch of study. Numerous papers dealing with a diversity of problems were published as the result of work in the new laboratory, among them such subjects as the ionic theory of solutions, electrocapillary phenomena, residual current, polarization capacity, over-voltage, the lead accumulator and the theory of nerve stimulation which explains the painlessness of the application of high-frequency electric currents, known as diathermy. The invention of the Nernst electric lamp made the name of the young physicist well known all over the world. In 1924, Nernst became president of the Reichsanstalt. His "Textbook of Theoretical Chemistry", the fifteenth edition of which has recently appeared in Germany, is well known all over the world and has been translated into several languages. During the Great War he spent some time at the front and was decorated with the Iron Cross of the first and second class. In 1920, he was awarded the Nobel Prize for chemistry. Prof. F. Krüger has written an appreciatory article in the May issue of *Research and Progress* (Berlin, N.W.7, Unter den Linden 8) on Nernst's life and work, filled, he says, with most intensive labour but richly rewarded in respect of research and teaching.

NERNST'S work covers many fields of theory and investigation. His theory of galvanic cells, published in 1889, in which he applied the new theory of ions to the explanation of the development of electromotive force and introduced the idea of an electrolytic solution pressure, still forms the basis of the theory of the cell. Equally important was his study of the theory of the diffusion of electrolytes and the development of the formula for the liquid contact potential (1888-89). The application of the quantum theory to physical chemistry interested him greatly, and his experimental investigations of the specific heats of solids at low temperatures laid a sound basis for one aspect of this theory. Among other important results was the fact that the specific heat of diamond becomes vanishingly small at low temperatures. This result was a consequence of Nernst's so-called Heat Theorem, or the Third Law of Thermodynamics, which he put forward in 1906. This has the most fundamental importance in chemical thermodynamics and gave a new impetus to

theoretical and experimental studies in this field, in which a large number of workers in all parts of the world took part. Another example of Nernst's insight into fundamental problems was his enunciation of the so-called chain mechanism of photochemical reactions, published in 1918. There is scarcely a branch of modern physical chemistry which has not been enriched by some important contribution from Nernst, and his influence on the development of the science has been most fruitful. His insistence on the equal importance of thermodynamics and the atomic theory at a time when the latter was beginning to fall into discredit in some quarters is a tribute to his sound judgment. As an investigator and as a teacher he stands out as one of the great leaders in science.

Plaque in Memory of Edward Clodd

THOSE who knew Edward Clodd personally and the multitude who were instructed by his numerous books and articles will welcome the placing of a plaque on June 15 on Strafford House, his Aldeburgh home during 1889-1930. It was here that he kept his library, where he spent all his spare time, and to which he retired. Strafford House recalls many pleasant and stimulating occasions to those who were privileged to be Clodd's guests. Throughout a long period Clodd invited mixed gatherings of men of very varied interests—literary men who had made their mark in different ways; leading men in other departments of learning, law, history, economics, and politics; administrators of Protectorates, Colonies, and the like; men who had come to the front rank in chemistry and physics, biology, anthropology, and archaeology. Any particular gathering contained representatives of some of these intellectual activities, each of whom blossomed out under the hospitality of the genial host, whose far-reaching interests embraced most aspects of the humanities and sciences. Not only were the talks and discussions memorable, but also the walks and especially trips in the little yacht the *Lotus*, where Clodd busied himself with sailing and in ministering personally to the material needs of his guests. Strafford House thus became a pleasant meeting place for men and women of varied pursuits and was a transient intellectual centre that had a definite social value for some forty years.

Museums and Schools

AN exhibition designed to demonstrate some of the opportunities for co-operation in function between museums and schools in the work of education opened in the Department of Archaeology and Egyptology of University College, University of London, Gower Street, London, W.C.1, on June 20 and will remain open daily until July 15. The material exhibited